UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/520,133	03/07/2000	Yudhveer S. Bagga	1-1-1-1-1-1-1-3-1	1350

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EXAMINER
BOUTAH, ALINA A

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 February 2004_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

This Action is in response to Applicant's amendment filed February 12, 2004. Claims 1-

19 are pending in the present application.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on February 12, 2004 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lucent

Technologies White Paper: *"Operations Architecture for Data-Centric Converged*

Telecommunications Networks: Lucent Technologies' Open Operations CORBA Architecture"

by Dr. Mark H. Mortensen in view of USPN 6,289,201 issued to Weber et al.

Regarding claim 1, Mortensen teaches a network management system comprising: an inter-domain configuration manager arranged between a set of one or more network service management applications and a plurality of network element domain managers, each of the domain managers being associated with a particular architectural or technological domain of a multi-layer network, the configuration manager implementing network service design and provisioning functions across a plurality of the domains of the network in conjunction with stored connectivity information characterizing the multi-layer network (page 6, "*Solving the Interdomain Problem – The Interdomain Manager (IDM)*"; figures on page 8).

However, Mortensen fails to explicitly teach wherein the inter-domain configuration manager further comprises an inter-domain tree manager, the inter-domain tree manager comprising a logical tree manager operative to manage a transport service and facility hierarchy associated with the multi-layer network, and to maintain corresponding parent-child relationships in one or more tree structures that reference the domains containing real-time network details associated with the transport service and facility hierarchy.

Weber teaches an inter-domain configuration manager comprising an inter-domain tree manager, the inter-domain tree manager comprising a logical tree manager operative to manage a transport service and facility hierarchy associated with the multi-layer network, and to maintain corresponding parent-child relationships in one or more tree structures that reference the domains containing real-time network details associated with the transport service and facility hierarchy (figure 2, col. 4, lines 4-16).

At the time the invention was made, one of ordinary skill in the art would have been motivated to employ an inter-domain tree manager in order to provide hierarchical structure

between the domains, therefore allowing quick retrieval of information associated with the

network.

Regarding claim 2, Mortensen teaches the system of claim 1 wherein the inter-domain

configuration manager is interfaced to at least one f the set of network service management

applications and the plurality of network element domain managers through a published

Common Object Request Broker Architecture (CORBA) Application Programming Interface

(API) (page 9, *"Interlayer Interfaces – CORBA's the Key!"*).

Regarding claim 3, Mortensen teaches the system of claim 1 wherein the set of one or

more network service management applications comprise one or more of an order manager, a

trouble manager, a billing manager, a customer service manager, and a service level reporter

(page 8, 2nd figure, *"Corporate Data Assets – Separating Data Repositories From Data Users

(Applications)"*).

Regarding claim 4, Mortensen teaches the system of claim 1 wherein the domains of the

multi-layer network comprise one or more of a circuit-switched domain, an Internet Protocol (IP)

domain, an Asynchronous Transfer Mode (ATM) domain, a Frame Relay (FR) domain, a

Synchronous Digital Hierarchy (SDH) domain, a Synchronous Optical Network (SONET)

domain, and an optical domain (page 5, lines 9-19).

Regarding claim 5, Mortensen teaches the system of claim 1 wherein the inter-domain

configuration manager provides single-point access to provisioning functions in a manner, which

is independent of the corresponding domains ("*Getting Real – The Limitations of Interdomain*

Management, last four lines).

Regarding claim 6, Mortensen teaches the system of claim 1 wherein the inter-domain

configuration manager provides single-point access to end-to-end views of services and their

underlying infrastructure, down to physical layer of the multi-layer network, in a manner which

is independent of the corresponding domains (page 6, "*Solving the Interdomain Problem – The*

Interdomain Manager (IDM)"; "*Getting Real – The Limitations of Interdomain Management*",

last four lines).

Regarding claim 7, Mortensen teaches the system of claim 1 wherein the inter-domain

configuration manager further comprises an inter-domain provisioning manager (page 6,

"*Solving the Interdomain Problem – The Interdomain Manager (IDM)*"; "*Getting Real – The*

Limitations of Interdomain Management"; page 7, lines 9-19). Mortensen fails to explicitly

teach an inter-domain tree manager. Weber teaches an inter-domain tree manager (figure 2, col.

4, lines 4-16). At the time the invention was made, one of ordinary skill in the art would have

been motivated to employ an inter-domain tree manager in order to provide hierarchical structure

between the domains, therefore allowing quick retrieval of information associated with the

network.

Regarding claim 8, Mortensen fails to explicitly teach the system of claim 7 wherein the

inter-domain tree manager maintains an end-to-end view of planned and provisioned transport

services and facilities for the multi-layer network. Weber teaches the inter-domain tree manager

maintaining an end-to-end view of planned and provisioned transport services and facilities for

the multi-layer network (figure 2, col. 4, lines 4-16). At the time the invention was made, one of

ordinary skill in the art would have been motivated to employ an inter-domain tree manager in

order to provide hierarchical structure between the domains, therefore allowing quick retrieval of

information associated with the network.

Regarding claim 9, Mortensen fails to explicitly teach the system of claim 7 wherein the

inter-domain tree manager comprises a logical tree manager, a view manager, and a connectivity

database for storing the connectivity information characterizing the multi-layer network. Weber

teaches the inter-domain tree manager comprising a logical tree manager, a view manager, and a

connectivity database for storing the connectivity information characterizing the multi-layer

network (figure 2, col. 4, lines 4-16). At the time the invention was made, one of ordinary skill in

the art would have been motivated to employ an inter-domain tree manager in order to provide

hierarchical structure between the domains, therefore allowing quick retrieval of information

associated with the network.

Regarding claim 10, Mortensen fails to explicitly teach the system of claim 9 wherein the

logical tree manager manages end-to-end transport service and facility hierarchy, and maintains

corresponding parent-child relationships in one or more tree structures that reference the domains

containing real-time network details associated with the transport service and facility hierarchy.
Weber teaches an inter-domain configuration manager comprising an inter-domain tree manager,
the inter-domain tree manager comprising a logical tree manager operative to manage a transport
service and facility hierarchy associated with the multi-layer network, and to maintain
corresponding parent-child relationships in one or more tree structures that reference the domains
containing real-time network details associated with the transport service and facility hierarchy
(figure 2, col. 4, lines 4-16).

At the time the invention was made, one of ordinary skill in the art would have been
motivated to employ an inter-domain tree manager in order to provide hierarchical structure
between the domains, therefore allowing quick retrieval of information associated with the
network.

Regarding claim 11, Mortensen teaches the system of claim 9 wherein the view manager
provides a plurality of different presentations of the network connectivity information, and
provides a particular presentation associated with a tree structure stored by the logical tree
manager upon receipt of a request for such a presentation (page 6, "*Solving the Interdomain
Problem – The Interdomain Manager (IDM)*"; "*Getting Real – The Limitations of Interdomain
Management*"; page 7, lines 9-19).

Regarding claim 12, Mortensen teaches the system of claim 7 wherein the inter-domain
provisioning manager provides provisioning of services and facilities across the multiple

domains (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*; page 7, lines 9-19).

Regarding claim 13, Mortensen teaches the system of claim 7 wherein the inter-domain provisioning manager comprises an end-to-end design manager and an implementation manager (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*).

Regarding claim 14, the system of claim 13 wherein the end-to-end design manager provides network service design capabilities across the plurality of domains, utilizing a set of design rules for inter-domain connectivity, and coordinates designs among the domains in the particular inter-domain path page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*).

Regarding claim 15, Mortensen teaches the system of claim 13 wherein the implementation manager coordinates the implementation of an end-to-end network service design across the plurality of domains (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*).

Regarding claim 16, Mortensen teaches the system of claim 1 further comprising an inter-domain fault management associated with the inter-domain configuration manager and arranged between at least a subset of the network service management applications and at least a subset of

the plurality of network element domain managers, the inter-domain fault manager providing fault management across the plurality of domains of the network (page 8, 1st figure, line 5).

Regarding claim 17, Mortensen teaches the system of claim 1 further comprising an inter-domain capacity manager associated with the inter-domain configuration manager and arranged between at least a subset of the network service management applications and at least a subset of the plurality of network element domain managers, the inter-domain manager providing management of transport capacity across the multi-layer network (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*; *"Getting Real – The Limitations of Interdomain Management"*; page 7, lines 9-19)

Claims 18 and 19 are similar to claim 1 therefore are also rejected under the same rationale.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: USPN 6,259,679 issued to Henderson et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N Boutah whose telephone number is (703) 305-5104. The examiner can normally be reached on Monday-Thursday (9:00 am-7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANB

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